Figure 1

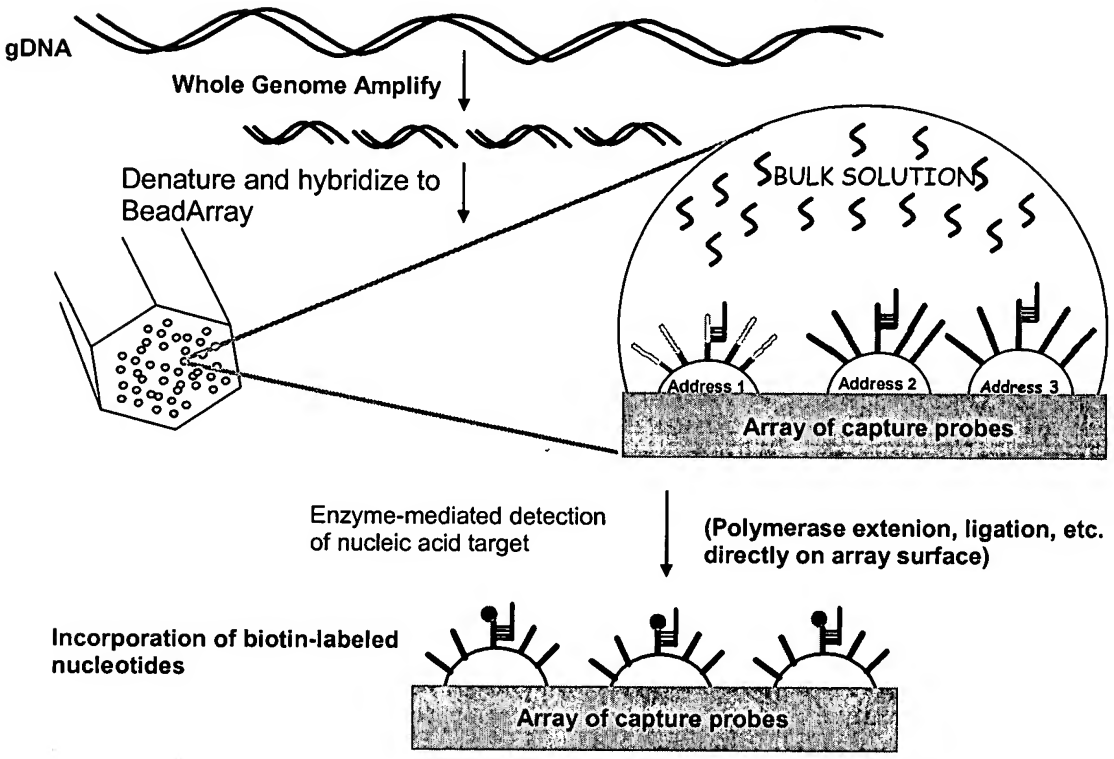

gDNA
Whole Genome Amplify
Denature and hybridize to BeadArray
BULK SOLUTION
Address 1
Address 2
Address 3
Array of capture probes
Enzyme-mediated detection of nucleic acid target
(Polymerase extenion, ligation, etc. directly on array surface)
Incorporation of biotin-labeled nucleotides
Array of capture probes

Figure 2

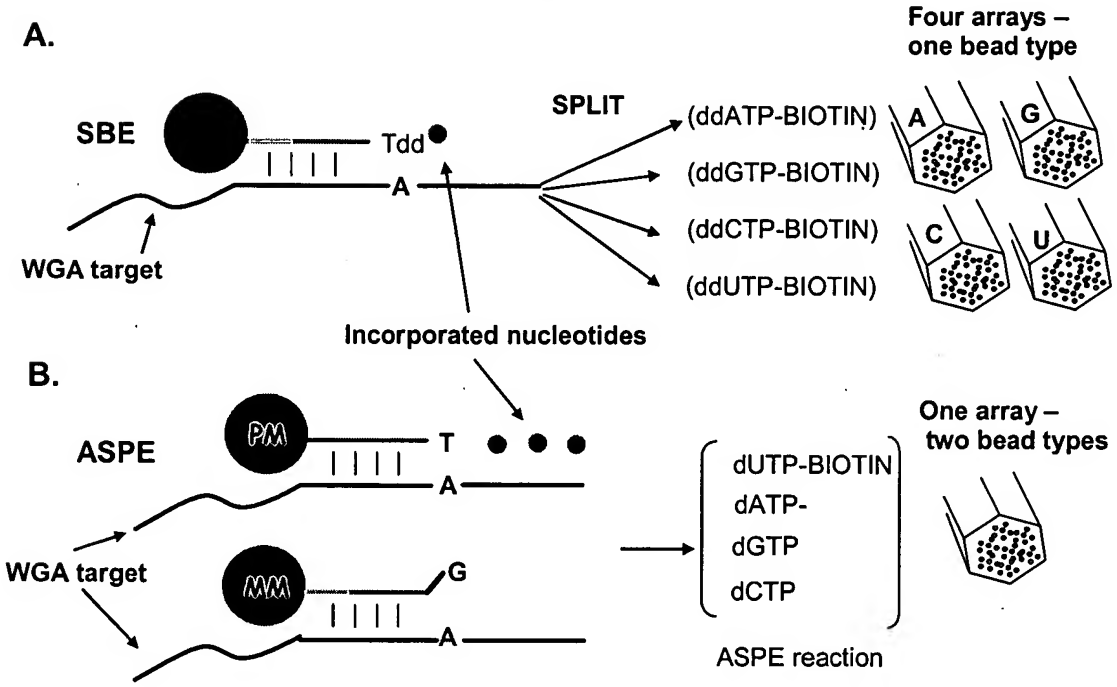
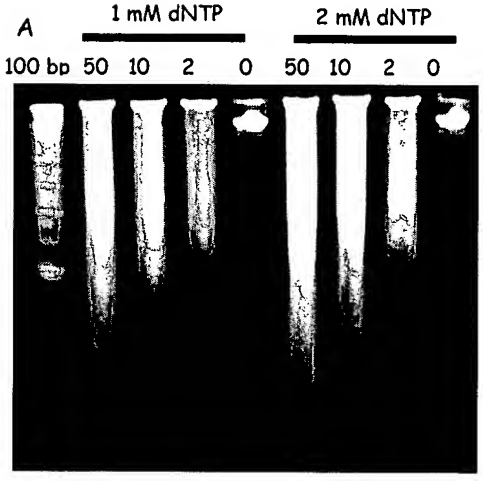


Figure 3



B.

Condition	dNTPs (mM)	Primer (uM)	Yield (ug)	Amplification
1	1	50	49.5	4950
2	1	10	28.5	2850
3	1	2	12.0	1200
4	1	0	6.0	600
5	2	50	79.5	7950
6	2	10	42.0	4200
7	2	2	21.0	2100
8	2	0	6.0	600

Figure 4

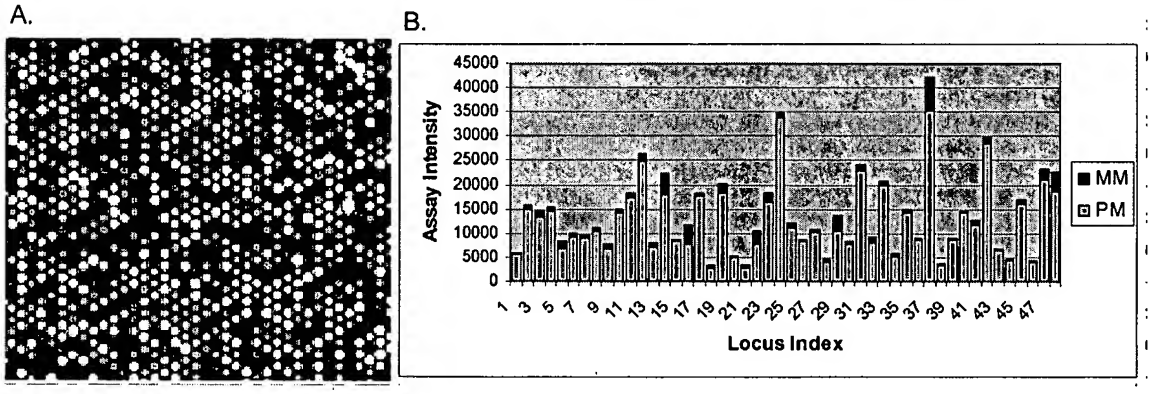


Figure 5

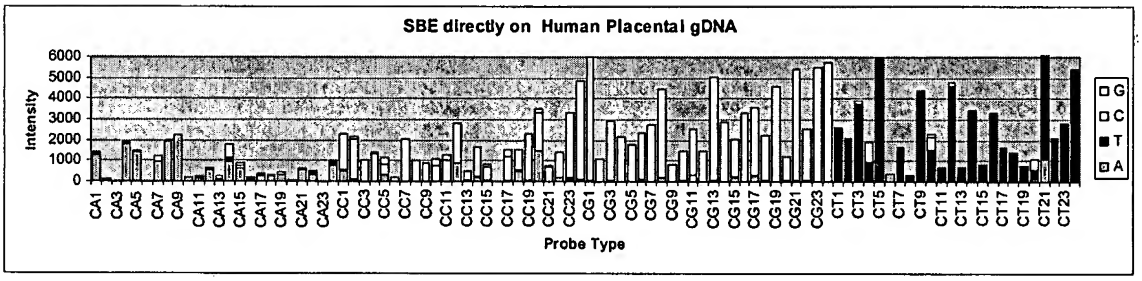


Figure 6

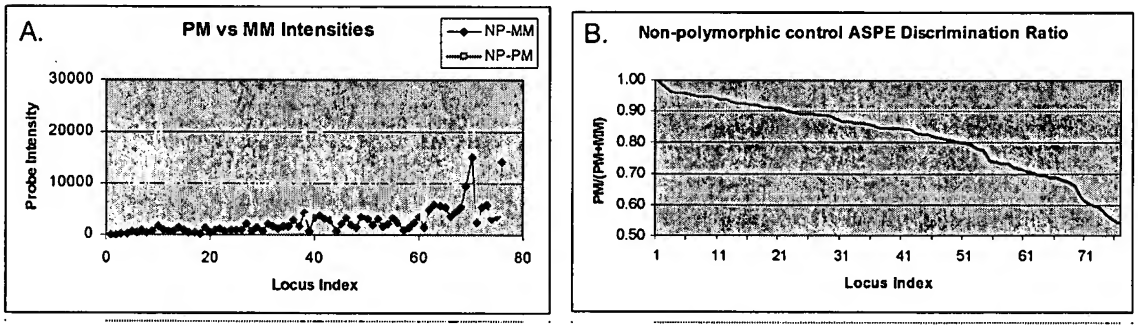


Figure 7

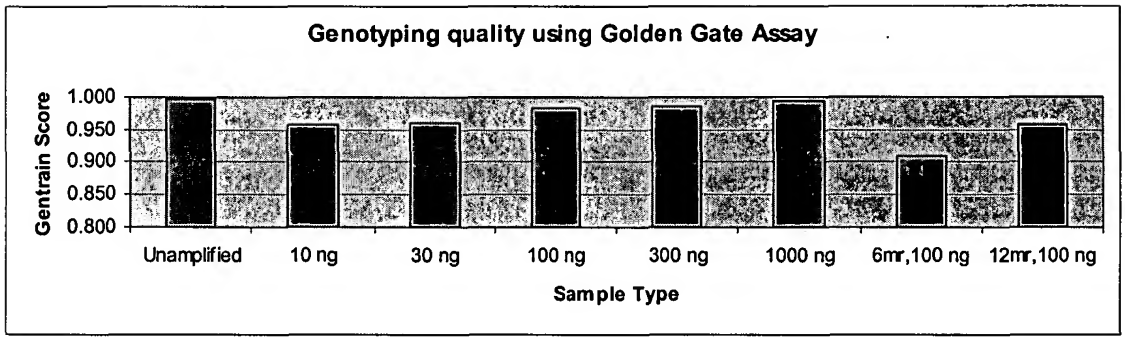


Figure 8

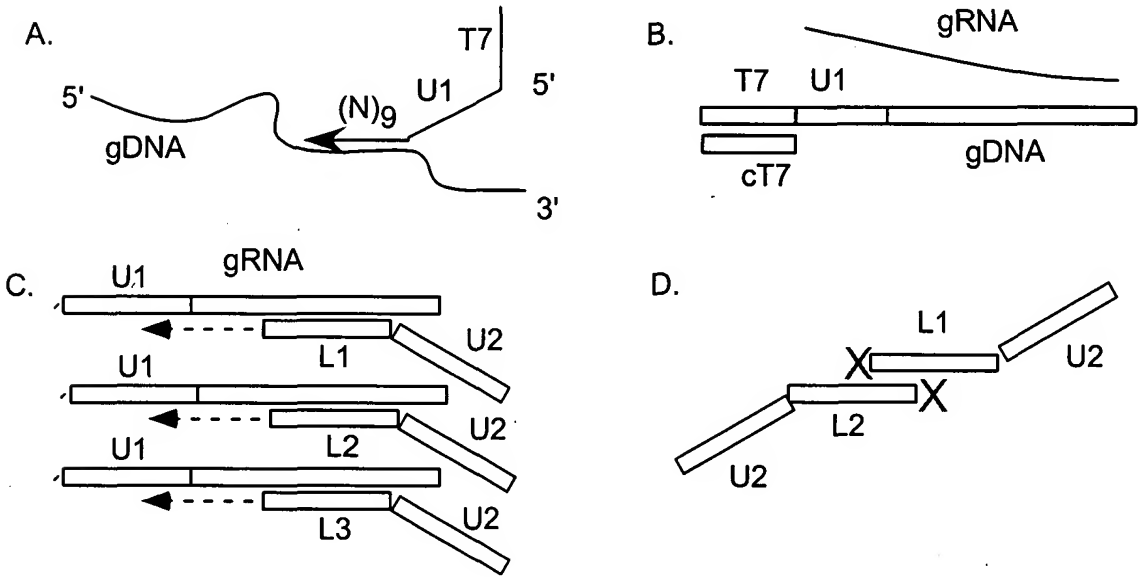


Figure 9

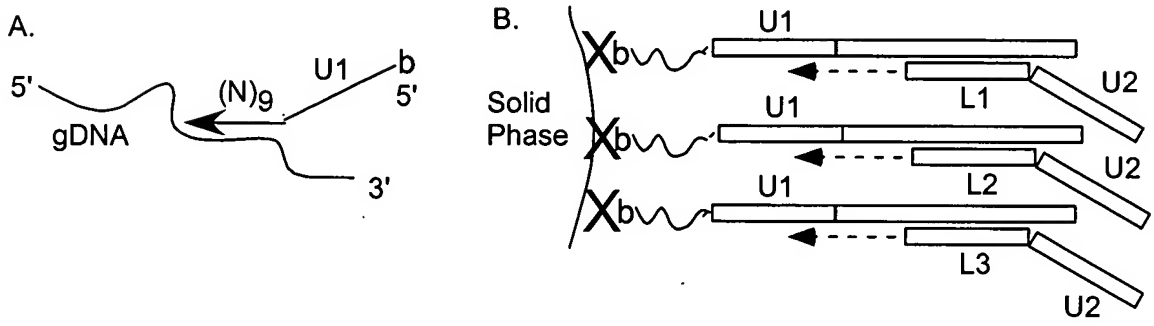
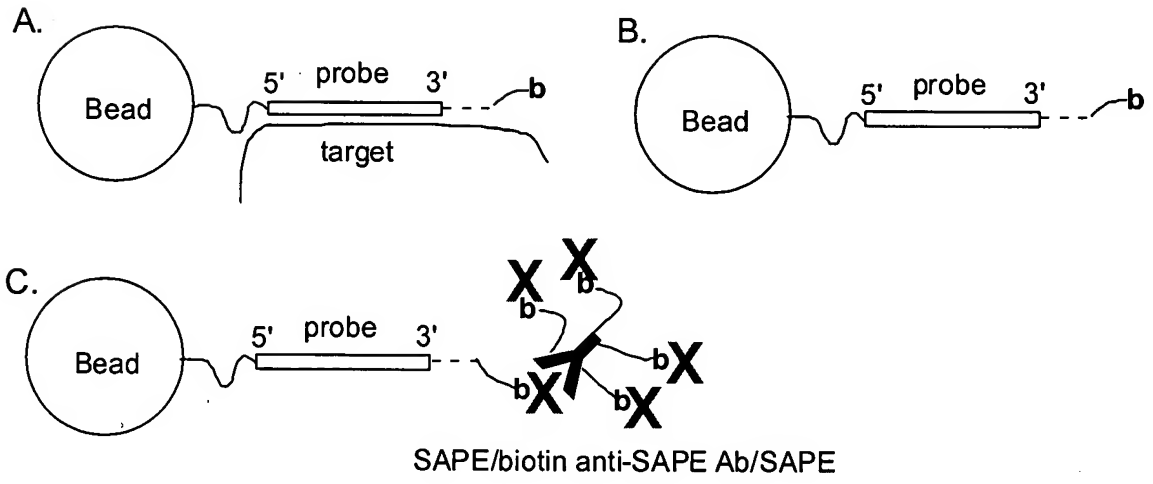


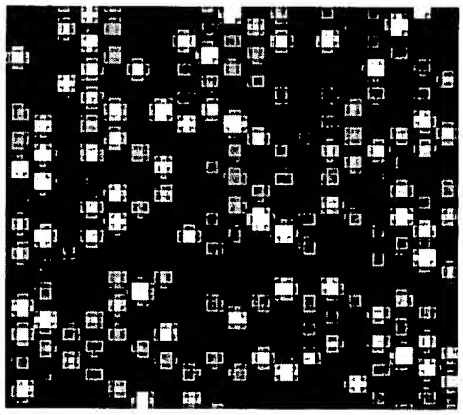
Figure 10



SAPE/biotin anti-SAPE Ab/SAPE

Figure 11

A.



B.

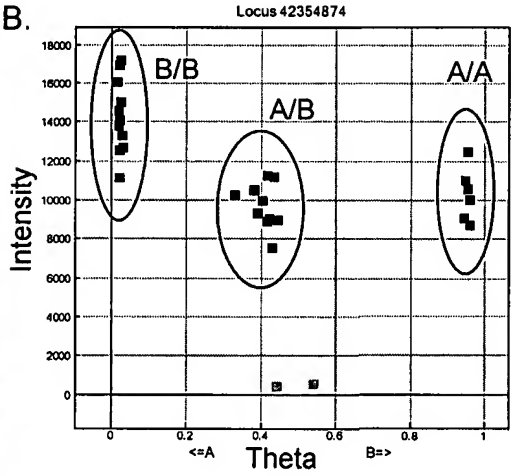
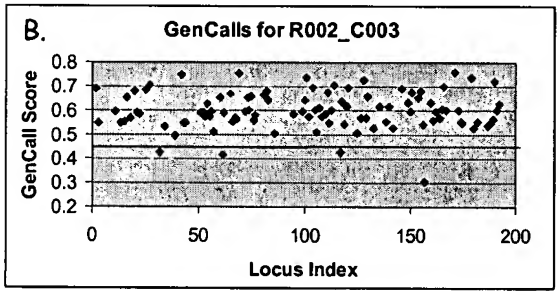
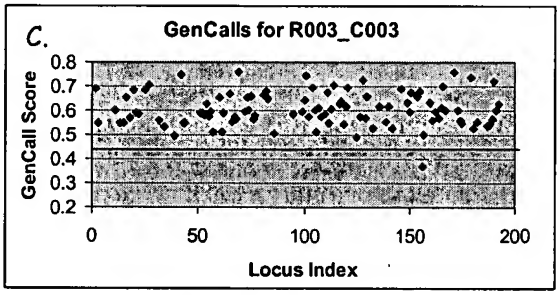

Locus 42354874
B/B
A/B
A/A
Intensity
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
0.2
0.4
0.6
0.8
1
<=A
Theta
B=>

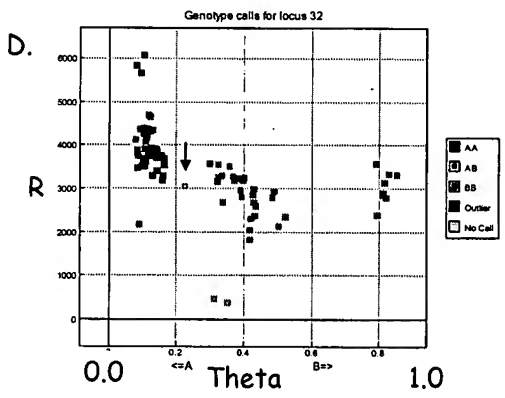
Figure 12

A.

Genotyping Accuracy:			
Call Rate	Accuracy	Calls	Correct Calls
100%	99.95%	4092	4090
99.70%	100%	4078	4078







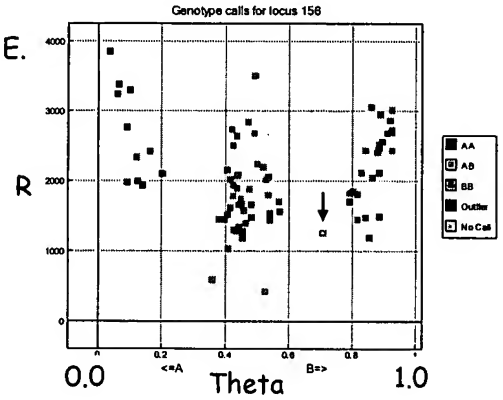


Figure 13

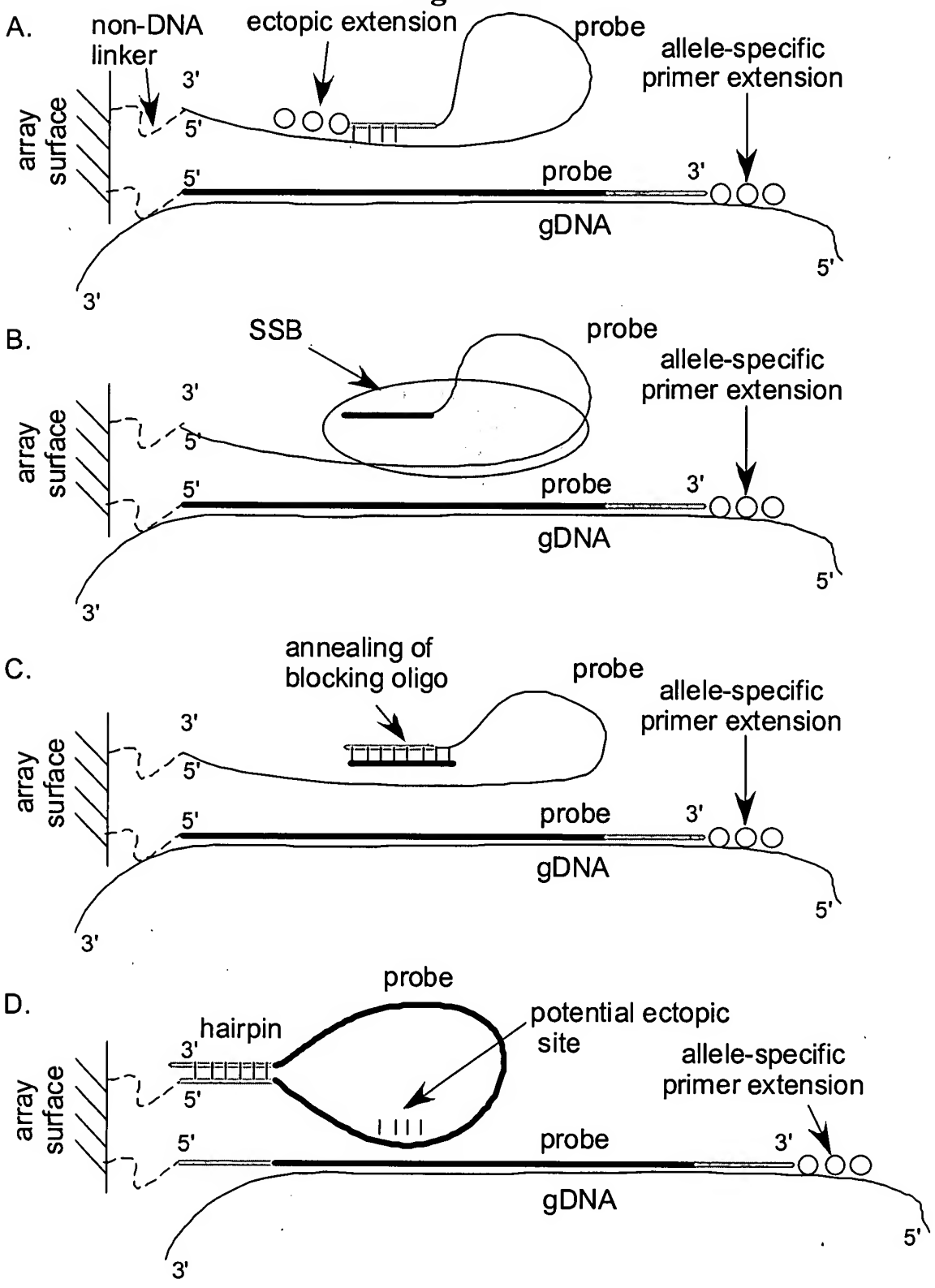
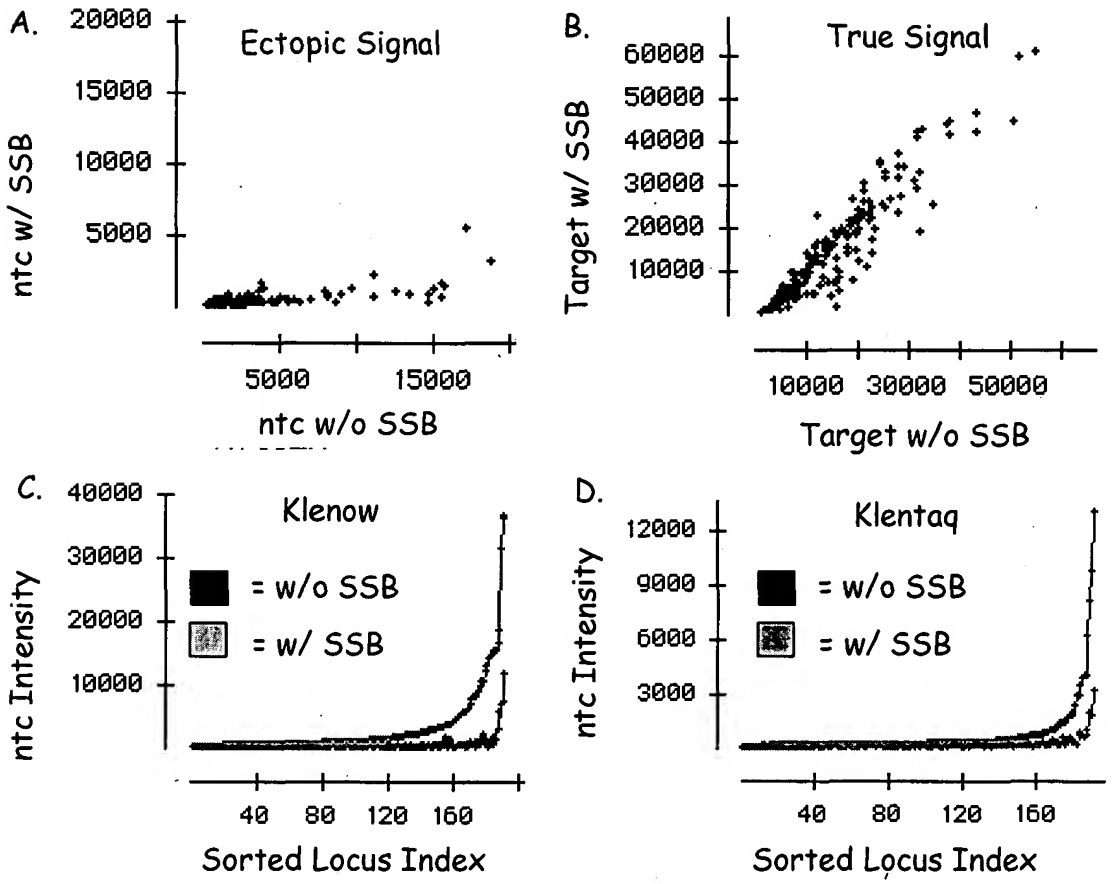

A.
non-DNA linker
ectopic extension
probe
allele-specific primer extension
array surface
3'
5'
probe
gDNA
B.
SSB
C.
annealing of blocking oligo
D.
hairpin
potential ectopic site

Figure 14


A.
Ectopic Signal
ntc w/ SSB
20000
15000
10000
5000
5000
15000
ntc w/o SSB
B.
True Signal
Target w/ SSB
60000
50000
40000
30000
20000
10000
10000
30000
50000
Target w/o SSB
C.
Klenow
= w/o SSB
= w/ SSB
ntc Intensity
40000
30000
20000
10000
40
80
120
160
Sorted Locus Index
D.
Klentaq
= w/o SSB
= w/ SSB
ntc Intensity
12000
9000
6000
3000
40
80
120
160
Sorted Locus Index